

[illegible]

```
LL      IIIIII  BBBB BBBB  VV      VV  EEEEEEEEE  CCCCCCCC  TTTTTTTTTT  000000  RRRRRRRR
LL      IIIIII  BBBB BBBB  VV      VV  EEEEEEEEE  CCCCCCCC  TTTTTTTTTT  000000  RRRRRRRR
LL      II      BB      BB  VV      VV  EE      EE  CC      CC  TT      TT  00      00  RR      RR
LL      II      BB      BB  VV      VV  EE      EE  CC      CC  TT      TT  00      00  RR      RR
LL      II      BB      BB  VV      VV  EE      EE  CC      CC  TT      TT  00      00  RR      RR
LL      II      BB      BB  VV      VV  EE      EE  CC      CC  TT      TT  00      00  RR      RR
LL      II      BB      BB  VV      VV  EE      EE  CC      CC  TT      TT  00      00  RR      RR
LL      II      BB      BB  VV      VV  EE      EE  CC      CC  TT      TT  00      00  RR      RR
LL      II      BB      BB  VV      VV  EE      EE  CC      CC  TT      TT  00      00  RR      RR
LL      II      BB      BB  VV      VV  EE      EE  CC      CC  TT      TT  00      00  RR      RR
LLLLLLLL  IIIIII  BBBB BBBB  VV      VV  EEEEEEEEE  CCCCCCCC  TTTTTTTTTT  000000  RRRRRRRR
LLLLLLLL  IIIIII  BBBB BBBB  VV      VV  EEEEEEEEE  CCCCCCCC  TTTTTTTTTT  000000  RRRRRRRR
```

```
LL      IIIIII  SSSSSSSS
LL      IIIIII  SSSSSSSS
LL      II      SS
LL      II      SS
LL      II      SS
LL      II      SS
LL      II      SSSSSS
LL      II      SSSSSS
LL      II      SS
LL      II      SS
LL      II      SS
LL      II      SS
LLLLLLLL  IIIIII  SSSSSSSS
LLLLLLLL  IIIIII  SSSSSSSS
```


(2) 60
(3) 132

DECLARATIONS
LIBRTL Vector

```
0000 1      .TITLE LIB$VECTOR - Entry vectors for LIBRTL.EXE
0000 2      .IDENT /1-011/ ; File: LIBVECTOR.MAR Edit:LEB1011
0000 3
0000 4
0000 5 :*****
0000 6 :*
0000 7 :* COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
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0000 23 :* SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.
0000 24 :*
0000 25 :*
0000 26 :*****
0000 27 :
0000 28
0000 29 :++
0000 30 : FACILITY: Run-Time Library - General Utility Procedures
0000 31 :
0000 32 : ABSTRACT:
0000 33 :
0000 34 :     This module contains the entry vector definitions for the
0000 35 :     VAX-11 Run-Time Library shareable image LIBRTL.EXE
0000 36 :
0000 37 : ENVIRONMENT: User mode, AST Reentrant
0000 38 :
0000 39 : AUTHOR: Steven B. Lionel, CREATION DATE: 28-October-1982
0000 40 :
0000 41 : MODIFIED BY:
0000 42 :
0000 43 : 1-001 - Original. SBL 28-October-1982
0000 44 : 1-002 - Make FOR$CNV_OUT_x entries separate - they were improperly declared
0000 45 :         as aliases of OT$$CVT_L_Tx routines. SBL 29-Nov-1982
0000 46 : 1-003 - Add LIB$GETxxI routines. SBL 19-Jan-1983
0000 47 : 1-004 - Add OT$$RET_A_CVT_TAB_R1, OT$$CVT_MUL and LIB$SIG_TO_STOP.
0000 48 :         FM 20-MAY-1983.
0000 49 : 1-005 - Add remaining LIB$, OT$$ and STR$ routines that were previously
0000 50 :         non-shared. LEB 23-May-1983.
0000 51 : 1-006 - Cleanup. LEB 24-May-1983.
0000 52 : 1-007 - Add OT$$CVT_L_TU, OT$$CVT_TU_L. SBL 26-May-1983
0000 53 : 1-008 - Add STR$MATCH_WILD and LIB$DAY OF WEEK. LEB 9-Jan-1984
0000 54 : 1-009 - Add LIB$FIND_IMAGE_SYMBOL, LIB$FIND_FILE_END and
0000 55 :         LIB$FILE_SCAN_END. LEB 25-Feb-1984
0000 56 : 1-010 - Add OT$$DIV_PKSHORT and OT$$DIV_PK LONG. DG 5-Mar-1984
0000 57 : 1-011 - Add LIB$CREATE_DIR. LEB 11-Apr-1984
```


LIB\$VECTOR
1-011

- Entry vectors for LIBRTL.EXE

L 1

15-SEP-1984 23:44:46
6-SEP-1984 11:12:03

VAX/VMS Macro V04-00
[LIBRTL.SRC]LIBVECTOR.MAR;1

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0000 58 ;--

```
0000 60      .SBTTL  DECLARATIONS
0000 61      :
0000 62      : LIBRARY MACRO CALLS:
0000 63      :
0000 64      : LIB$:LIBRTL.MLB required
0000 65      :
0000 66      : EXTERNAL DECLARATIONS:
0000 67      :
0000 68      : .DSABL  GBL                ; Force all external symbols to be declared
0000 69      :
0000 70      : MACROS:
0000 71      :
0000 72      :
0000 73      :+
0000 74      : Macro to define an entry vector for a CALL entry point
0000 75      : -
0000 76      :
0000 77      : .MACRO  VCALL      NAME
0000 78      : .EXTRN      NAME
0000 79      : .ALIGN  QUAD
0000 80      : .TRANSFER      NAME
0000 81      : .MASK          NAME
0000 82      : JMP            NAME+2
0000 83      : .ENDM
0000 84      :
0000 85      :+
0000 86      : Macro to define an entry vector for a JSB entry point
0000 87      : -
0000 88      :
0000 89      : .MACRO  VJSB      NAME
0000 90      : .EXTRN      NAME
0000 91      : .ALIGN  QUAD
0000 92      : .TRANSFER      NAME
0000 93      : JMP            NAME
0000 94      : .BLKB          2
0000 95      : .ENDM
0000 96      :
0000 97      :+
0000 98      : Macro to define a table that is included in the vector.  The macros
0000 99      : invoked by VTAB are in LIB$:LIBRTL.MLB.
0000 100     : -
0000 101     :
0000 102     : .MACRO  VTAB      NAME
0000 103     : .ALIGN  QUAD
0000 104     : .TRANSFER      NAME
0000 105     NAME:: $'NAME
0000 106     : .ENDM
0000 107     :
0000 108     :+
0000 109     : Macro to define an alias for the next vectored entry point
0000 110     : -
0000 111     :
0000 112     : .MACRO  ALIAS      NAME
0000 113     : .TRANSFER      NAME
0000 114     : .ENDM
0000 115     :
0000 116     :
```


LIB\$VECTOR
1-011

- Entry vectors for LIBRTL.EXE
DECLARATIONS

N 1

15-SEP-1984 23:44:46
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VAX/VMS Macro V04-00
[LIBRTL.SRC]LIBVECTOR.MAR;1

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```
0000 117 :  
0000 118 : EQUATED SYMBOLS:  
0000 119 :  
0000 120 : NONE  
0000 121 :  
0000 122 : OWN STORAGE:  
0000 123 :  
0000 124 : NONE  
0000 125 :  
0000 126 : PSECT DECLARATIONS:  
0000 127 :  
00000000 128 : .PSECT $LIB$VECTOR PIC, USR, CON, REL, LCL, SHR, -  
0000 129 : EXE, RD, NOWRT, QUAD  
0000 130 :
```

```
0000 132      .SBTTL  LIBRTL Vector
0000 133
0000 134 :+
0000 135 : Define vectored entry points for the General Utility Procedures
0000 136 : by module in alphabetical order.
0000 137 :-
0000 138 : Any additions to this file should be reflected in
0000 139 : COM$;LIBRTLVEC.DAT. All new entry points must be appended to the end
0000 140 : of the list. NEVER change existing entries unless you are sure that
0000 141 : what you do won't break existing programs.
0000 142 :-
0000 143
0000 144 : Module LIB$AB_ASC_EBC
0000 145
0000 146      VTAB      LIB$AB_ASC_EBC
0000 147
0000 148 : Module LIB$AB_EBC_ASC
0000 149
0000 150      VTAB      LIB$AB_EBC_ASC
0000 151
0000 152 : Module LIB$AB_UPCASE
0000 153
0000 154      VTAB      LIB$AB_UPCASE
0000 155
0000 156 : Module LIB$ANALYZE_SDESC
0000 157
0000 158      VCALL      LIB$ANALYZE_SDESC
0000 159      VJSB      LIB$ANALYZE_SDESC_R2
0000 160
0000 161 : Module LIB$AST_IN_PROG
0000 162
0000 163      VCALL      LIB$AST_IN_PROG
0000 164
0000 165 : Module LIB$ATTACH
0000 166
0000 167      VCALL      LIB$ATTACH
0000 168
0000 169 : Module LIB$CLI_CALLBACK
0000 170
0000 171      VCALL      LIB$DELETE_LOGICAL
0000 172      VCALL      LIB$DELETE_SYMBOL
0000 173      VCALL      LIB$DISABLE_CTRL
0000 174      VCALL      LIB$ENABLE_CTRL
0000 175      VCALL      LIB$GET_SYMBOL
0000 176      VCALL      LIB$SET_LOGICAL
0000 177      VCALL      LIB$SET_SYMBOL
0000 178
0000 179 : Module LIB$CRC
0000 180
0000 181      VCALL      LIB$CRC
0000 182
0000 183 : Module LIB$CRC_TABLE
0000 184
0000 185      VCALL      LIB$CRC_TABLE
0000 186
0000 187 : Module LIB$CURRENCY
0000 188
```


0368	189	VCALL	LIB\$CURRENCY
0370	190		
0370	191	; Module LIB\$CVTDF	
0370	192		
0370	193	VCALL	LIB\$CVTDF
0378	194		
0378	195	; Module LIB\$CVT_ATB	
0378	196		
0378	197	VCALL	LIB\$CVT_DTB
0380	198	VCALL	LIB\$CVT-HTB
0388	199	VCALL	LIB\$CVT_OTB
0390	200		
0390	201	; Module LIB\$DEC_OVER	
0390	202		
0390	203	VCALL	LIB\$DEC_OVER
0398	204		
0398	205	; Module LIB\$DELETE_FILE	
0398	206		
0398	207	VCALL	LIB\$DELETE_FILE
03A0	208		
03A0	209	; Module LIB\$DIGIT_SEP	
03A0	210		
03A0	211	VCALL	LIB\$DIGIT_SEP
03A8	212		
03A8	213	; Module LIB\$EF	
03A8	214		
03A8	215	VCALL	LIB\$FREE_EF
03B0	216	VCALL	LIB\$GET_EF
03B8	217	VCALL	LIB\$RESERVE_EF
03C0	218		
03C0	219	; Module LIB\$ESTABLISH	
03C0	220		
03C0	221	VCALL	LIB\$ESTABLISH
03C8	222		
03C8	223	; Module LIB\$EXTV	
03C8	224		
03C8	225	VCALL	LIB\$EXTV
03D0	226		
03D0	227	; Module LIB\$EXTZV	
03D0	228		
03D0	229	VCALL	LIB\$EXTZV
03D8	230		
03D8	231	; Module LIB\$FFC	
03D8	232		
03D8	233	VCALL	LIB\$FFC
03E0	234		
03E0	235	; Module LIB\$FFS	
03E0	236		
03E0	237	VCALL	LIB\$FFS
03E8	238		
03E8	239	; Module LIB\$FILESCAN	
03E8	240		
03E8	241	VCALL	LIB\$FILE_SCAN
03F0	242	VCALL	LIB\$FIND_FILE
03F8	243		
03F8	244	; Module LIB\$FIXUP_FLT	
03F8	245		

03F8	246	VCALL	LIB\$FIXUP_FLT
0400	247		
0400	248	; Module LIB\$FLT_UNDER	
0400	249		
0400	250	VCALL	LIB\$FLT_UNDER
0408	251		
0408	252	; Module LIB\$GET_INPUT	
0408	253		
0408	254	VCALL	LIB\$GET_COMMAND
0410	255	VCALL	LIB\$GET_INPUT
0418	256		
0418	257	; Module LIB\$GET_OPCODE	
0418	258		
0418	259	VCALL	LIB\$GET_OPCODE
0420	260		
0420	261	; Module LIB\$INDEX	
0420	262		
0420	263	VCALL	LIB\$INDEX
0428	264		
0428	265	; Module LIB\$INSV	
0428	266		
0428	267	VCALL	LIB\$INSV
0430	268		
0430	269	; Module LIB\$INT_OVER	
0430	270		
0430	271	VCALL	LIB\$INT_OVER
0438	272		
0438	273	; Module LIB\$LOCC	
0438	274		
0438	275	VCALL	LIB\$LOCC
0440	276		
0440	277	; Module LIB\$LP_LINES	
0440	278		
0440	279	VCALL	LIB\$LP_LINES
0448	280		
0448	281	; Module LIB\$LUN	
0448	282		
0448	283	VCALL	LIB\$FREE_LUN
0450	284	VCALL	LIB\$GET_LUN
0458	285		
0458	286	; Module LIB\$MATCHC	
0458	287		
0458	288	VCALL	LIB\$MATCHC
0460	289		
0460	290	; Module LIB\$MATCH_COND	
0460	291		
0460	292	VCALL	LIB\$MATCH_COND
0468	293		
0468	294	; Module LIB\$MOVTC	
0468	295		
0468	296	VCALL	LIB\$MOVTC
0470	297		
0470	298	; Module LIB\$MOVTUC	
0470	299		
0470	300	VCALL	LIB\$MOVTUC
0478	301		
0478	302	; Module LIB\$PUT_OUTPUT	


```
0478 303
0478 304          VCALL  LIB$PUT_OUTPUT
0480 305
0480 306 ; Module LIB$RADIX_POINT
0480 307
0480 308          VCALL  LIB$RADIX_POINT
0488 309
0488 310 ; Module LIB$RENAME_FILE
0488 311
0488 312          VCALL  LIB$RENAME_FILE
0490 313
0490 314 ; Module LIB$REVERT
0490 315
0490 316          VCALL  LIB$REVERT
0498 317
0498 318 ; Module LIB$SCANC
0498 319
0498 320          VCALL  LIB$SCANC
04A0 321
04A0 322 ; Module LIB$SCOPY
04A0 323
04A0 324          VCALL  LIB$SCOPY_DXDX
04A8 325          VJSB   LIB$SCOPY_DXDX6
04B0 326          VCALL  LIB$SCOPY_R_DX
04B8 327          VJSB   LIB$SCOPY_R_DX6
04C0 328          VCALL  LIB$SFREET_DD
04C8 329          VJSB   LIB$SFREET1_DD6
04D0 330          VCALL  LIB$SFREEN_DD
04D8 331          VJSB   LIB$SFREEN_DD6
04E0 332          VCALL  LIB$SGET1_DD
04E8 333          VJSB   LIB$SGET1_DD_R6
04F0 334
04F0 335 ; Module LIB$SIGNAL
04F0 336
04F0 337          VCALL  LIB$SIGNAL
04F8 338          VCALL  LIB$STOP
0500 339
0500 340 ; Module LIB$SIG_TO_RET
0500 341
0500 342          VCALL  LIB$SIG_TO_RET
0508 343
0508 344 ; Module LIB$SKPC
0508 345
0508 346          VCALL  LIB$SKPC
0510 347
0510 348 ; Module LIB$SPANC
0510 349
0510 350          VCALL  LIB$SPANC
0518 351
0518 352 ; Module LIB$SPAWN
0518 353
0518 354          VCALL  LIB$SPAWN
0520 355
0520 356 ; Module LIB$STAT_VM
0520 357
0520 358          VCALL  LIB$SHOW_VM
0528 359          VCALL  LIB$STAT_VM
```

```
0530 360
0530 361 ; Module LIB$TPARSE
0530 362
0530 363         VCALL  LIB$TPARSE
0538 364
0538 365 ; Module LIB$TRA_ASC_EBC
0538 366
0538 367         VCALL  LIB$TRA_ASC_EBC
0540 368
0540 369 ; Module LIB$TRA_EBC_ASC
0540 370
0540 371         VCALL  LIB$TRA_EBC_ASC
0548 372
0548 373 ; Module LIB$VM
0548 374
0548 375         VCALL  LIB$FREE_VM
0550 376         VCALL  LIB$GET_VM
0558 377
0558 378 ; Module LIB$WAIT
0558 379
0558 380         VCALL  LIB$WAIT
0560 381
0560 382 ; Module OT$$$CVTDT
0560 383
0560 384         VJSB    OT$$$CVT_D_T_R8
0568 385         VJSB    OT$$$CVT_F_T_R8
0570 386
0570 387 ; Module OT$$$CVTRT
0570 388
0570 389         VJSB    OT$$$CVT_G_T_R8
0578 390         VJSB    OT$$$CVT_H_T_R8
0580 391
0580 392 ; Module OT$SCVTLT
0580 393
0580 394         VCALL    OT$SCVT_L_TB
0588 395         VCALL    OT$SCVT_L_TI
0590 396         VCALL    OT$SCVT_L_TL
0598 397         VCALL    OT$SCVT_L_TO
05A0 398         VCALL    OT$SCVT_L_TZ
05A8 399         ; See below for FOR$CNV_OUT_x alternate entries
05A8 400
05A8 401 ; Module OT$SCVTTF
05A8 402
05A8 403         VCALL    OT$SCVT_T_F
05B0 404
05B0 405 ; Module OT$SCVTTL
05B0 406
05B0 407         ALIAS    FOR$CNV_IN_I
05B0 408         VCALL    OT$SCVT_TI_L
05B8 409
05B8 410 ; Module OT$SCVTLL
05B8 411
05B8 412         ALIAS    FOR$CNV_IN_L
05B8 413         VCALL    OT$SCVT_TL_L
05C0 414
05C0 415 ; Module OT$SCVTOL
05C0 416
```



```
05C0 417 VCALL OTSS$CVT_TB_L
05C8 418 ALIAS FOR$CNV-IN-O
05C8 419 VCALL OTSS$CVT-TO-L
05D0 420 ALIAS FOR$CNV-IN-Z
05D0 421 VCALL OTSS$CVT-TZ-L
05D8 422
05D8 423 ; Module OTSS$CVTTR
05D8 424
05D8 425 ALIAS FOR$CNV-IN DEFG
05D8 426 VCALL OTSS$CVT-T-D
05E0 427 VCALL OTSS$CVT-T-G
05E8 428 VCALL OTSS$CVT-T-H
05F0 429
05F0 430 ; Module OTSS$MOVE
05F0 431
05F0 432 VCALL OTSS$MOVE3
05F8 433 VJSB OTSS$MOVE3_R5
0600 434 VCALL OTSS$MOVE5
0608 435 VJSB OTSS$MOVE5_R5
0610 436
0610 437 ; Module OTSS$SCOPY
0610 438
0610 439 VCALL OTSS$SCOPY_DXDX
0618 440 VJSB OTSS$SCOPY_DXDX6
0620 441 VCALL OTSS$SCOPY_R_DX
0628 442 VJSB OTSS$SCOPY_R_DX6
0630 443 VCALL OTSS$SFREET_DD
0638 444 VJSB OTSS$SFREET1-DD6
0640 445 VCALL OTSS$SFREEN-DD
0648 446 VJSB OTSS$SFREEN-DD6
0650 447 VCALL OTSS$SET1_DD
0658 448 VJSB OTSS$SET1_DD_R6
0660 449
0660 450 ; Module STR$ANALYZE_SDESC
0660 451
0660 452 VCALL STR$ANALYZE_SDESC
0668 453 VJSB STR$ANALYZE_SDESC_R1
0670 454
0670 455 ; Module STR$APPEND
0670 456
0670 457 VCALL STR$APPEND
0678 458
0678 459 ; Module STR$COMPARE
0678 460
0678 461 VCALL STR$COMPARE
0680 462
0680 463 ; Module STR$COMPARE_CASE_BLIND
0680 464
0680 465 VCALL STR$CASE_BLIND_COMPARE
0688 466
0688 467 ; Module STR$COMPARE_EQ
0688 468
0688 469 VCALL STR$COMPARE_EQ
0690 470
0690 471 ; Module STR$CONCAT
0690 472
0690 473 VCALL STR$CONCAT
```

```
0698 474
0698 475 ; Module STR$COPY
0698 476
0698 477          VCALL STR$COPY_DX
06A0 478          VJSB STR$COPY_DX_R8
06A8 479          VCALL STR$COPY_R
06B0 480          VJSB STR$COPY_R_R8
06B8 481
06B8 482 ; Module STR$DUPL_CHAR
06B8 483
06B8 484          VCALL STR$DUPL_CHAR
06C0 485          VJSB STR$DUPL_CHARR8
06C8 486
06C8 487 ; Module STR$FIND_FIRST
06C8 488
06C8 489          VCALL STR$FIND_FIRST_IN_SET
06D0 490          VCALL STR$FIND_FIRST_NOT_IN_SET
06D8 491
06D8 492 ; Module STR$FIND_FIRST_SUBSTRING
06D8 493
06D8 494          VCALL STR$FIND_FIRST_SUBSTRING
06E0 495
06E0 496 ; Module STR$GET_FREE
06E0 497
06E0 498          VCALL STR$FREE1_DX
06E8 499          VJSB STR$FREE1_DX_R4
06F0 500          VCALL STR$GET1_DX
06F8 501          VJSB STR$GET1_DX_R4
0700 502
0700 503 ; Module STR$LEFT
0700 504
0700 505          VCALL STR$LEFT
0708 506          VJSB STR$LEFT_R8
0710 507
0710 508 ; Module STR$LEN_EXTR
0710 509
0710 510          VCALL STR$LEN_EXTR
0718 511          VJSB STR$LEN_EXTR_R8
0720 512
0720 513 ; Module STR$POSITION
0720 514
0720 515          VCALL STR$POSITION
0728 516          VJSB STR$POSITION_R6
0730 517
0730 518 ; Module STR$POS_EXTR
0730 519
0730 520          VCALL STR$POS_EXTR
0738 521          VJSB STR$POS_EXTR_R8
0740 522
0740 523 ; Module STR$PREFIX
0740 524
0740 525          VCALL STR$PREFIX
0748 526
0748 527 ; Module STR$REPLACE
0748 528
0748 529          VCALL STR$REPLACE
0750 530          VJSB STR$REPLACE_R8
```



```
0758 531
0758 532 ; Module STR$RIGHT
0758 533
0758 534         VCALL  STR$RIGHT
0760 535         VJSB   STR$RIGHT_R8
0768 536
0768 537 ; Module STR$TRANSLATE
0768 538
0768 539         VCALL  STR$TRANSLATE
0770 540
0770 541 ; Module STR$TRIM
0770 542
0770 543         VCALL  STR$TRIM
0778 544
0778 545 ; Module STR$UPCASE
0778 546
0778 547         VCALL  STR$UPCASE
0780 548
0780 549 ;+
0780 550 ; End of initial LIBRTL vector.  All subsequent additions must be made
0780 551 ; after this point.
0780 552 ; -
0780 553
0780 554 ; Module OTS$CVTLT (continued)
0780 555
0780 556         VCALL  FOR$CNV_OUT_I ; Use OTS$CVT_L_TI instead
0788 557         VCALL  FOR$CNV_OUT_L ; Use OTS$CVT_L_TL instead
0790 558         VCALL  FOR$CNV_OUT_O ; Use OTS$CVT_L_TO instead
0798 559         VCALL  FOR$CNV_OUT_Z ; Use OTS$CVT_L_TZ instead
07A0 560
07A0 561 ; Module LIB$GETDVI
07A0 562
07A0 563         VCALL  LIB$GETDVI
07A8 564
07A8 565 ; Module LIB$GETJPI
07A8 566
07A8 567         VCALL  LIB$GETJPI
07B0 568
07B0 569 ; Module LIB$GETSYI
07B0 570
07B0 571         VCALL  LIB$GETSYI
07B8 572
07B8 573 ; Module LIB$SIGSTOP
07B8 574
07B8 575         VCALL  LIB$SIG_TO_STOP
07C0 576
07C0 577 ; Module OTS$SCVTRT
07C0 578
07C0 579         VJSB   OTS$RET_A_CVT_TAB_R1
07C8 580         VJSB   OTS$SCVT_MOL
07D0 581
07D0 582 ;+
07D0 583 ; Add all the remaining LIB$, STR$ and OTS$ modules that were previously
07D0 584 ; non-shared.
07D0 585 ; -
07D0 586 ; Module LIB$ADDX
07D0 587
```

07D0	588	VCALL	LIB\$ADDX
07D8	589	VCALL	LIB\$SUBX
07E0	590		
07E0	591	; Module LIB\$ASN_WTH_MBX	
07E0	592		
07E0	593	VCALL	LIB\$ASN_WTH_MBX
07E8	594		
07E8	595	; Module LIB\$BBCCI	
07E8	596		
07E8	597	VCALL	LIB\$BBCCI
07F0	598		
07F0	599	; Module LIB\$BBSSI	
07F0	600		
07F0	601	VCALL	LIB\$BBSSI
07F8	602		
07F8	603	; Module LIB\$BINARY_TREE	
07F8	604		
07F8	605	VCALL	LIB\$INSERT_TREE
0800	606	VCALL	LIB\$LOOKUP_TREE
0808	607	VCALL	LIB\$TRAVERSE_TREE
0810	608		
0810	609	; Module LIB\$CALLG	
0810	610		
0810	611	VCALL	LIB\$CALLG
0818	612		
0818	613	; Module LIB\$CHAR	
0818	614		
0818	615	VCALL	LIB\$CHAR
0820	616		
0820	617	; Module LIB\$COMMON	
0820	618		
0820	619	VCALL	LIB\$GET_COMMON
0828	620	VCALL	LIB\$PUT_COMMON
0830	621		
0830	622	; Module LIB\$DATE_TIME	
0830	623		
0830	624	VCALL	LIB\$DATE_TIME
0838	625		
0838	626	; Module LIB\$DAY	
0838	627		
0838	628	VCALL	LIB\$DAY
0840	629		
0840	630	; Module LIB\$DO_COMMAND	
0840	631		
0840	632	VCALL	LIB\$DO_COMMAND
0848	633		
0848	634	; Module LIB\$EDIV	
0848	635		
0848	636	VCALL	LIB\$EDIV
0850	637		
0850	638	; Module LIB\$EMODD	
0850	639		
0850	640	VCALL	LIB\$EMODD
0858	641		
0858	642	; Module LIB\$EMODF	
0858	643		
0858	644	VCALL	LIB\$EMODF

0860	645	
0860	646	; Module LIB\$EMODG
0860	647	
0860	648	VCALL LIB\$EMODG
0868	649	
0868	650	; Module LIB\$EMODH
0868	651	
0868	652	VCALL LIB\$EMODH
0870	653	
0870	654	; Module LIB\$EMUL
0870	655	
0870	656	VCALL LIB\$EMUL
0878	657	
0878	658	; Module LIB\$GET_FOREIGN
0878	659	
0878	660	VCALL LIB\$GET_FOREIGN
0880	661	
0880	662	; Module LIB\$ICHAR
0880	663	
0880	664	VCALL LIB\$ICHAR
0888	665	
0888	666	; Module LIB\$INSQHI
0888	667	
0888	668	VCALL LIB\$INSQHI
0890	669	
0890	670	; Module LIB\$INSQTI
0890	671	
0890	672	VCALL LIB\$INSQTI
0898	673	
0898	674	; Module LIB\$LEN
0898	675	
0898	676	VCALL LIB\$LEN
08A0	677	
08A0	678	; Module LIB\$LOOKUP_KEY
08A0	679	
08A0	680	VCALL LIB\$LOOKUP_KEY
08A8	681	
08A8	682	; Module LIB\$MOV3
08A8	683	
08A8	684	VCALL LIB\$MOV3
08B0	685	
08B0	686	; Module LIB\$MOV5
08B0	687	
08B0	688	VCALL LIB\$MOV5
08B8	689	
08B8	690	; Module LIB\$POLYD
08B8	691	
08B8	692	VCALL LIB\$POLYD
08C0	693	
08C0	694	; Module LIB\$POLYF
08C0	695	
08C0	696	VCALL LIB\$POLYF
08C8	697	
08C8	698	; Module LIB\$POLYG
08C8	699	
08C8	700	VCALL LIB\$POLYG
08D0	701	

```
08D0 702 ; Module LIB$POLYH
08D0 703
08D0 704          VCALL  LIB$POLYH
08D8 705
08D8 706 ; Module LIB$REMQHI
08D8 707
08D8 708          VCALL  LIB$REMQHI
08E0 709
08E0 710 ; Module LIB$REMQTI
08E0 711
08E0 712          VCALL  LIB$REMQTI
08E8 713
08E8 714 ; Module LIB$RUN_PROGRAM
08E8 715
08E8 716          VCALL  LIB$RUN_PROGRAM
08F0 717
08F0 718 ; Module LIB$SYS_ASCTIM
08F0 719
08F0 720          VCALL  LIB$SYS_ASCTIM
08F8 721
08F8 722 ; Module LIB$SYS_FAO
08F8 723
08F8 724          VCALL  LIB$SYS_FAO
0900 725
0900 726 ; Module LIB$SYS_FAOL
0900 727
0900 728          VCALL  LIB$SYS_FAOL
0908 729
0908 730 ; Module LIB$SYS_GETMSG
0908 731
0908 732          VCALL  LIB$SYS_GETMSG
0910 733
0910 734 ; Module LIB$SYS_TRNLOG
0910 735
0910 736          VCALL  LIB$SYS_TRNLOG
0918 737
0918 738 ; Module LIB$TIMER
0918 739
0918 740          VCALL  LIB$FREE_TIMER
0920 741          VCALL  LIB$INIT_TIMER
0928 742          VCALL  LIB$SHOW_TIMER
0930 743          VCALL  LIB$STAT_TIMER
0938 744
0938 745 ; Module LIB$TRIM_FILESPEC
0938 746
0938 747          VCALL  LIB$TRIM_FILESPEC
0940 748
0940 749 ; Module OT$CNVOUT
0940 750
0940 751          ALIAS  COB$CNVOUT
0940 752          VCALL  OT$CNVOUT
0948 753          VCALL  OT$CNVOUT_G
0950 754          VCALL  OT$CNVOUT_H
0958 755
0958 756 ; Module OT$CVTDP_R9
0958 757
0958 758          ALIAS  COB$CVTDP_R9
```


0958	759	VJSB	OTSS\$CVTDP_R9
0960	760		
0960	761	; Module OTSS\$CVTFP_R9	
0960	762		
0960	763	ALIAS	COB\$CVTFP_R9
0960	764	VJSB	OTSS\$CVTFP_R9
0968	765		
0968	766	; Module OTSS\$CVTGP_R9	
0968	767		
0968	768	VJSB	OTSS\$CVTGP_R9
0970	769		
0970	770	; Module OTSS\$CVTHP_R9	
0970	771		
0970	772	VJSB	OTSS\$CVTHP_R9
0978	773		
0978	774	; Module OTSS\$CVTPD_R9	
0978	775		
0978	776	ALIAS	COB\$CVTPD_R9
0978	777	VJSB	OTSS\$CVTPD_R9
0980	778		
0980	779	; Module OTSS\$CVTPF_R9	
0980	780		
0980	781	ALIAS	COB\$CVTPF_R9
0980	782	VJSB	OTSS\$CVTPF_R9
0988	783		
0988	784	; Module OTSS\$CVTPG_R9	
0988	785		
0988	786	VJSB	OTSS\$CVTPG_R9
0990	787		
0990	788	; Module OTSS\$CVTPH_R9	
0990	789		
0990	790	VJSB	OTSS\$CVTPH_R9
0998	791		
0998	792	; Module OTSS\$CVTRDP_R9	
0998	793		
0998	794	ALIAS	COB\$CVTRDP_R9
0998	795	VJSB	OTSS\$CVTRDP_R9
09A0	796		
09A0	797	; Module OTSS\$CVTRFP_R9	
09A0	798		
09A0	799	ALIAS	COB\$CVTRFP_R9
09A0	800	VJSB	OTSS\$CVTRFP_R9
09A8	801		
09A8	802	; Module OTSS\$CVTRGP_R9	
09A8	803		
09A8	804	VJSB	OTSS\$CVTRGP_R9
09B0	805		
09B0	806	; Module OTSS\$CVTRHP_R9	
09B0	807		
09B0	808	VJSB	OTSS\$CVTRHP_R9
09B8	809		
09B8	810	; Module STR\$ARITH	
09B8	811		
09B8	812	VCALL	STR\$ADD
09C0	813	VCALL	STR\$DIVIDE
09C8	814	VCALL	STR\$MUL
09D0	815	VCALL	STR\$RECIP

```
09D8 816          VCALL  STR$RCUND
09E0 817
09E0 818 ; Module OTSS$CVTLT
09E0 819
09E0 820          VCALL  OTSS$CVT_L_TU
09E8 821
09E8 822 ; Module OTSS$CVTTIL
09E8 823
09E8 824          VCALL  OTSS$CVT_TU_L
09F0 825
09F0 826
09F0 827 ; Module STR$MATCH
09F0 828
09F0 829          VCALL  STR$MATCH_WILD
09F8 830
09F8 831
09F8 832 ; Module LIB$DAY_OF_WEEK
09F8 833
09F8 834          VCALL  LIB$DAY_OF_WEEK
0A00 835
0A00 836 ; Module LIB$FILESCAN
0A00 837
0A00 838          VCALL  LIB$FIND_FILE_END
0A08 839          VCALL  LIB$FILE_SCAN_END
0A10 840
0A10 841 ; Module LIB$FIND_IMAGE
0A10 842
0A10 843          VCALL  LIB$FIND_IMAGE_SYMBOL
0A18 844
0A18 845 ; Module OTSS$DIV_PKSHORT
0A18 846
0A18 847          VCALL  OTSS$DIV_PKSHORT
0A20 848
0A20 849 ; Module OTSS$DIV_PK_LONG
0A20 850
0A20 851          VCALL  OTSS$DIV_PK_LONG
0A28 852
0A28 853 ; Module LIB$CREATE_DIR
0A28 854
0A28 855          VCALL  LIB$CREATE_DIR
0A30 856
0A30 857          .END
```

; End of module LIB\$VECTOR

LIB\$VECTOR
Symbol table

- Entry vectors for LIBRTL.EXE

B 3

15-SEP-1984 23:44:46 VAX/VMS Macro V04-00
6-SEP-1984 11:12:03 [LIBRTL.SRC]LIBVECTOR.MAR;1Page 18
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FOR\$CNV_OUT_I	*****	X	01	LIB\$FREE_VM	*****	X	01
FOR\$CNV_OUT_L	*****	X	01	LIB\$GETDVI	*****	X	01
FOR\$CNV_OUT_O	*****	X	01	LIB\$GETJPI	*****	X	01
FOR\$CNV_OUT_Z	*****	X	01	LIB\$GETSYI	*****	X	01
LIB\$AB_ASC_EBC	00000000	RG	01	LIB\$GET_COMMAND	*****	X	01
LIB\$AB_EBC_ASC	00000100	RG	01	LIB\$GET_COMMON	*****	X	01
LIB\$AB_UPCASE	00000200	RG	01	LIB\$GET_EF	*****	X	01
LIB\$ADDX	*****	X	01	LIB\$GET_FOREIGN	*****	X	01
LIB\$ANALYZE_SDESC	*****	X	01	LIB\$GET_INPUT	*****	X	01
LIB\$ANALYZE_SDESC_R2	*****	X	01	LIB\$GET_LUN	*****	X	01
LIB\$ASN_WTH_MBX	*****	X	01	LIB\$GET_OPCODE	*****	X	01
LIB\$AST_IN_PROG	*****	X	01	LIB\$GET_SYMBOL	*****	X	01
LIB\$ATTACH	*****	X	01	LIB\$GET_VM	*****	X	01
LIB\$BBCCI	*****	X	01	LIB\$ICHAR	*****	X	01
LIB\$BBSSI	*****	X	01	LIB\$INDEX	*****	X	01
LIB\$CALLG	*****	X	01	LIB\$INIT_TIMER	*****	X	01
LIB\$CHAR	*****	X	01	LIB\$INSERT_TREE	*****	X	01
LIB\$CRC	*****	X	01	LIB\$INSQHI	*****	X	01
LIB\$CRC_TABLE	*****	X	01	LIB\$INSQTI	*****	X	01
LIB\$CREATE_DIR	*****	X	01	LIB\$INSV	*****	X	01
LIB\$CURRENCY	*****	X	01	LIB\$INT_OVER	*****	X	01
LIB\$CVTDF	*****	X	01	LIB\$LEN	*****	X	01
LIB\$CVT_DTB	*****	X	01	LIB\$LOCC	*****	X	01
LIB\$CVT-HTB	*****	X	01	LIB\$LOOKUP_KEY	*****	X	01
LIB\$CVT-OTB	*****	X	01	LIB\$LOOKUP_TREE	*****	X	01
LIB\$DATE_TIME	*****	X	01	LIB\$LP_LINES	*****	X	01
LIB\$DAY	*****	X	01	LIB\$MATCHC	*****	X	01
LIB\$DAY_OF_WEEK	*****	X	01	LIB\$MATCH_COND	*****	X	01
LIB\$DEC_OVER	*****	X	01	LIB\$MOVCS	*****	X	01
LIB\$DELETE_FILE	*****	X	01	LIB\$MOVCS5	*****	X	01
LIB\$DELETE_LOGICAL	*****	X	01	LIB\$MOVTC	*****	X	01
LIB\$DELETE_SYMBOL	*****	X	01	LIB\$MOVTUC	*****	X	01
LIB\$DIGIT_SEP	*****	X	01	LIB\$POLYD	*****	X	01
LIB\$DISABLE_CTRL	*****	X	01	LIB\$POLYF	*****	X	01
LIB\$DO_COMMAND	*****	X	01	LIB\$POLYG	*****	X	01
LIB\$EDITV	*****	X	01	LIB\$POLYH	*****	X	01
LIB\$EMODD	*****	X	01	LIB\$PUT_COMMON	*****	X	01
LIB\$EMODF	*****	X	01	LIB\$PUT_OUTPUT	*****	X	01
LIB\$EMODG	*****	X	01	LIB\$RADIX_POINT	*****	X	01
LIB\$EMODH	*****	X	01	LIB\$REMQHI	*****	X	01
LIB\$EMUL	*****	X	01	LIB\$REMQTI	*****	X	01
LIB\$ENABLE_CTRL	*****	X	01	LIB\$RENAME_FILE	*****	X	01
LIB\$ESTABLISH	*****	X	01	LIB\$RESERVE_EF	*****	X	01
LIB\$EXTV	*****	X	01	LIB\$REVERT	*****	X	01
LIB\$EXTZV	*****	X	01	LIB\$RUN_PROGRAM	*****	X	01
LIB\$FFC	*****	X	01	LIB\$SCANC	*****	X	01
LIB\$FFS	*****	X	01	LIB\$SCOPY_DXDX	*****	X	01
LIB\$FILE_SCAN	*****	X	01	LIB\$SCOPY_DXDX6	*****	X	01
LIB\$FILE_SCAN_END	*****	X	01	LIB\$SCOPY-R_DX	*****	X	01
LIB\$FIND_FILE	*****	X	01	LIB\$SCOPY-R_DX6	*****	X	01
LIB\$FIND_FILE_END	*****	X	01	LIB\$SET_LOGICAL	*****	X	01
LIB\$FIND_IMAGE_SYMBOL	*****	X	01	LIB\$SET_SYMBOL	*****	X	01
LIB\$FIXUP_FLT	*****	X	01	LIB\$FREE1_DD	*****	X	01
LIB\$FLT_UNDER	*****	X	01	LIB\$FREE1-DD6	*****	X	01
LIB\$FREE_EF	*****	X	01	LIB\$FREEDD	*****	X	01
LIB\$FREE_LUN	*****	X	01	LIB\$FREEDD6	*****	X	01
LIB\$FREE_TIMER	*****	X	01	LIB\$GET1_DD	*****	X	01

[illegible]

LIB\$VECTOR
Symbol table

- Entry vectors for LIBRTL.EXE

D 3

15-SEP-1984 23:44:46
6-SEP-1984 11:12:03

VAX/VMS Macro V04-00
[LIBRTL.SRC]LIBVECTOR.MAR;1

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STR\$RIGHT_R8
STR\$ROUND
STR\$TRANSLATE
STR\$TRIM
STR\$UPCASE

```
***** X 01
***** X 01
***** X 01
***** X 01
***** X 01
```

+-----+
! Psect synopsis !
+-----+

PSECT name

Allocation

PSECT No.

Attributes

ABS
\$LIB\$VECTOR

```
00000000 ( 0.) 00 ( 0.) NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
00000A30 (2608.) 01 ( 1.) PIC USR CON REL LCL SHR EXE RD NOWRT NOVEC QUAD
```

+-----+
! Performance indicators !
+-----+

Phase	Page faults	CPU Time	Elapsed Time
Initialization	36	00:00:00.08	00:00:00.88
Command processing	154	00:00:00.35	00:00:03.31
Pass 1	209	00:00:04.74	00:00:16.40
Symbol table sort	0	00:00:00.20	00:00:00.88
Pass 2	149	00:00:01.62	00:00:07.35
Symbol table output	27	00:00:00.11	00:00:00.44
Psect synopsis output	2	00:00:00.01	00:00:00.01
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	579	00:00:07.11	00:00:29.30

The working set limit was 1350 pages.

40821 bytes (80 pages) of virtual memory were used to buffer the intermediate code.

There were 20 pages of symbol table space allocated to hold 234 non-local and 0 local symbols.

857 source lines were read in Pass 1, producing 45 object records in Pass 2.

13 pages of virtual memory were used to define 7 macros.

+-----+
! Macro library statistics !
+-----+

Macro library name

Macros defined

-\$255\$DUA28:[LIBRTL.OBJ]LIBRTL.MLB;1

3

-\$255\$DUA28:[SYSLIB]STARLET.MLB;2

0

TOTALS (all libraries)

3

87 GETS were required to define 3 macros.

There were no errors, warnings or information messages.

MACRO/ENABLE=SUPPRESSION/LIS=LIS\$:LIBVECTOR/OBJ=OBJ\$:LIBVECTOR MSRC\$:LIBVECTOR/UPDATE=(ENH\$:LIBVECTOR)+LIB\$:LIBRTL/LIB

0211 AH-BT13A-SE
VAX/VMS V4.0

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